

Oral Presentation Title: "Power and Propulsion – The Keys to Space Exploration"

Presented to: Continuing Learning Experience - Frontiers of Space
California State University, Fullerton

Abstract:

Space exploration has depended on advances in power and propulsion technologies. This talk will focus on the evolution of power and propulsion needs and technological capabilities for robotic planetary exploration. In the area of space power, the evolution of capabilities in photovoltaic, electrochemical, and nuclear electric power will be surveyed. In the area of space propulsion, the evolution of capabilities in chemical and electric propulsion will be surveyed. Looking ahead, the proposed Nuclear Systems Initiative will be described using material cleared by NASA Headquarters for public release. Historical missions will be described in terms of the power and propulsion technologies that were utilized. This talk will not cover launch vehicles and their unique power propulsion requirements and capabilities.